

**Comparing Maternal Deaths  
Occurring at Home, in Transit and in  
Facilities Using Ethiopia's National  
MDSR Data**

RCOG 2017

Cape town

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# Declaration of interest

- None

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# Outline

- Introduction
- Objectives
- Methodology
- Results
- Conclusion and recommendation

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# Introduction(1)

- Ethiopia is the second most populous country in Africa with projected population size of  $\approx$  200 million (2016 ) and covering area of 1.1 million square kms.
- Administratively, Ethiopia is divided into nine geographical regions and two administrative cities.
- women of reproductive age constitute 23.4% of the population
- Total fertility rate of 4.6 (2016 DHS)

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## Introduction(2)

According to latest EDHS results (2016) in the five years preceding the survey

- 412 per 100,000 LBs (MMR)
- 28 percent skilled birth attendance
- 62 percent ANC attendance

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## Introduction(3)

- Ethiopia has launched Maternal death surveillance and response (MDSR) system in 2013.
- MDSR is being implemented through integrating with existing PHEM/IDSR system categorized as one of immediately reportable event.
- PHEM/IDSR system comprises community and Health facility surveillance with more than 80% completeness and timeliness of reporting on weekly bases.

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# Introduction(4)

- National MDSR system
  - ✓ Weekly reporting
  - ✓ Maternal death report summarizing death review
- National database at EPHI
- Home death data set



# International experience of home maternal death

- Most countries have an **institutional** focus to their maternal death reviews



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# International experience of home maternal death

- Burkino Faso has good community data

population of 17m  
and MMR of 341 and 66%  
SBA

- Bangladesh uses verbal autopsies at sub regional level

population 164m, MMR of  
176 and 20% Skilled birth  
attendance



## Objective

To compare maternal deaths occurring at home, in transit and facilities with respect to differences in causes of death and other key variables useful to MCH policy and practice.

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# Methods

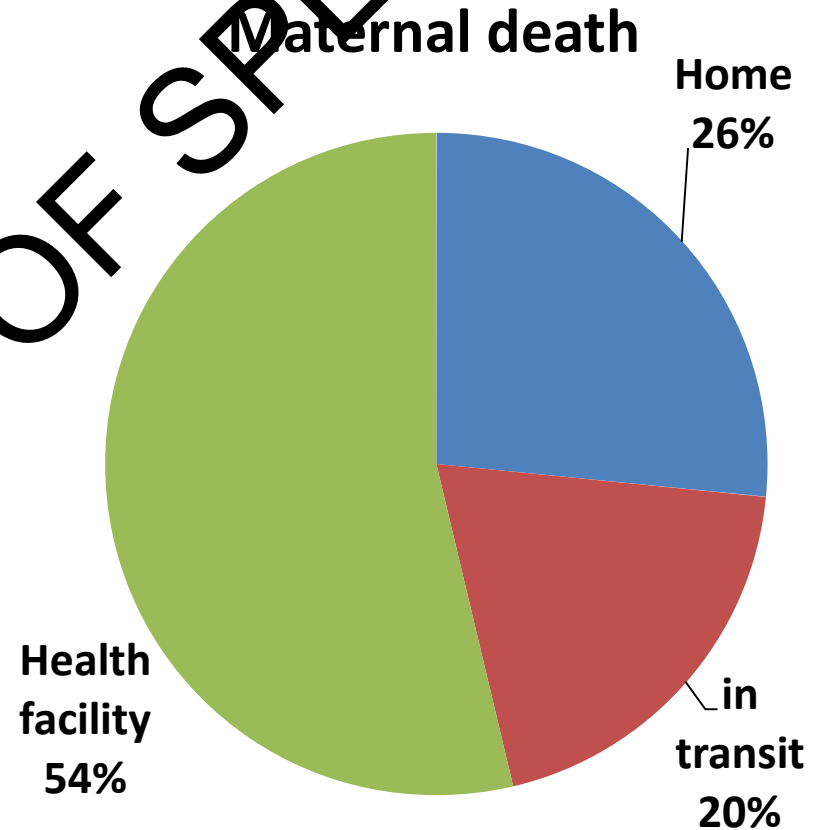
- We extracted case-based maternal death data for all maternal deaths reported to the national MDSR database of the Public Health Emergency Management centre from May 2013 until June 2016 for which a Verbal Autopsy was conducted.
- Stratifying by place of death, we analysed causes of death and socio-demographic attributes.

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# Results(1)

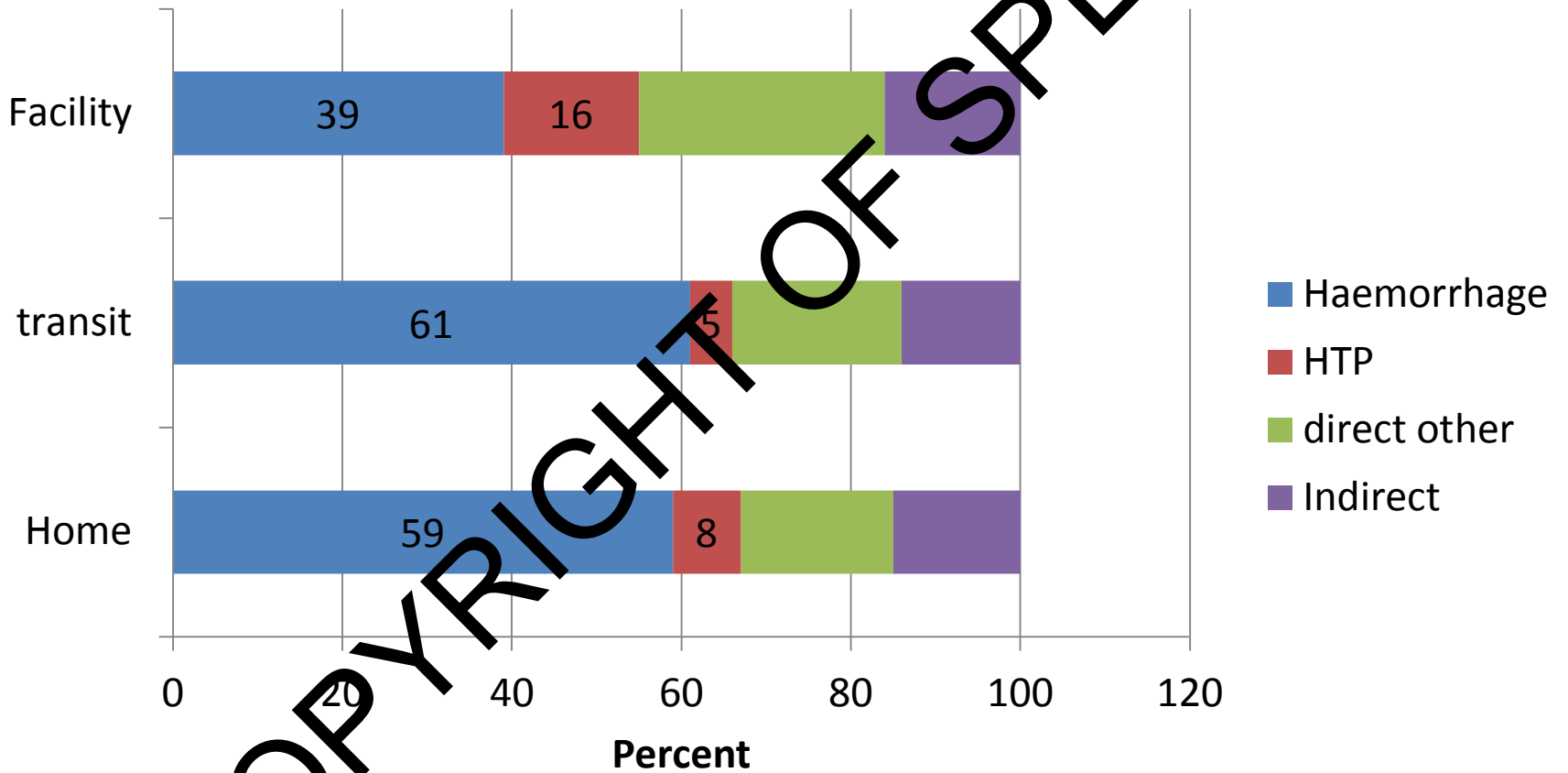
## Place of death:

- In total, 726 maternal deaths were reported based on Verbal Autopsies.
- 193 (27%) occurred at home
- 143 (20%) in transit
- 390 (53%) in facilities.



# Result(2)

Proportion of causes of death by Place of death



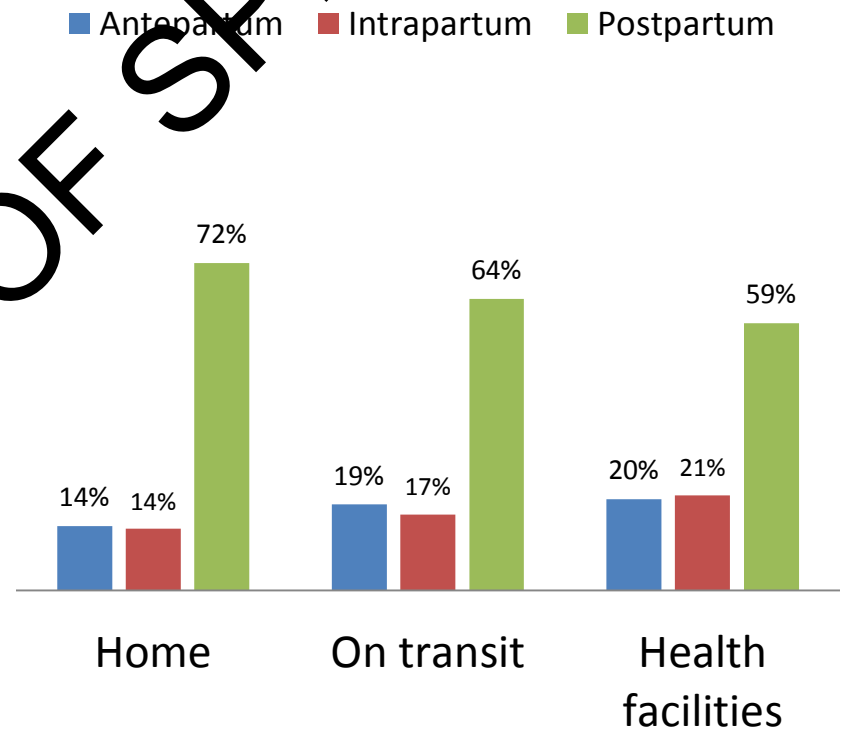
## Result(3)

- Deaths occurring at home or in transit were overwhelmingly due to haemorrhage.
- All other causes of death made up a smaller proportion of home/in transit deaths than those in facilities.
- For example, pre-eclampsia accounted for 8.3% of home deaths, 4.9% of deaths in transit, but 15.9% of facility deaths.

## Result(4)

### Timing of death

- Most home-based deaths occurred during postpartum (72.1%), notably higher than those in transit (64.2) and facilities (58.9).



# Conclusions

- Post-partum haemorrhage is the largest cause of maternal deaths in Ethiopia, and is heavily represented among home and in-transit deaths.
- This is likely due to delayed recognition of the problem and time reaching an equipped facility.
- Lower educated women may be less likely to recognise danger signs and/or reach a facility quickly.



# Recommendations

- This data must be used at all levels of the healthcare system
- At community level efforts to **educate communities** about haemorrhage signs, use of maternity homes and birth plan
- **Health centres** must be equipped to deal with haemorrhage with trained staff and oxytocics

# Recommendations

- **Health professionals** providing ANC must be aware of the need to identify women at risk of haemorrhage ie high parity, multiple pregnancy, previous history of PPH, anaemia etc and advise them accordingly
- **Health managers/local administrators** must ensure there are good referral networks, and transport is available
- **Health managers** and **health professionals** must work together to prioritise post-partum care

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# Limitations

- Patchy data- minimum of 15 years to establish comprehensive MDSR system across the country
- Under reporting of maternal deaths
- Lack of post mortems to confirm cause of death



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Thanks for your attention

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